

CLAIMS

We claim:

- 1 1. A stowable seating apparatus for a vehicle having a floor defining a floor
2 surface, the seating apparatus comprising:
3 a seat receiving recess in the floor, extending downward from the floor
4 surface and opening upward through the floor surface; and
5 a seat including a seat cushion and a leg operatively attaching the seat
6 cushion to the floor for selective movement of the seat with respect to the seat receiving
7 recess between a deployed position of the seat and a stowed position of the seat in the seat
8 receiving recess;
9 the seat cushion having an upper surface for receiving the buttocks of a
10 passenger when the seat is in the deployed position, and a lower surface facing the floor
11 surface when the seat is in the deployed position, the seat cushion being inverted when
12 the seat is in the stowed position with the upper surface of the seat cushion facing
13 downward in the seat receiving recess and the lower surface of the seat cushion facing
14 upward in the seat receiving recess;
15 the leg having an upper pivot operatively attached to the lower surface of
16 the seat cushion and a lower pivot operatively attached to the floor for selective pivoting
17 movement of the seat between the deployed and the stowed positions of the seat by
18 pivoting the seat cushion about the upper pivot and pivoting the leg about the lower pivot
19 between a substantially vertical deployed position of the leg and a substantially horizontal
20 stowed position of the leg, with the leg in the substantially horizontal stowed position

21 extending into the seat receiving recess in a direction substantially parallel to the floor
22 surface.

1 2. The stowable seating apparatus of claim 1 wherein the seat is selectively
2 movable in a transverse direction with respect to the seat receiving recess.

1 3. The stowable seating apparatus of claim 2 wherein the seat is movable
2 between a first transverse position of the seat whereat the seat cannot be pivoted into the
3 seat receiving recess and a second transverse position of the seat whereat the seat can be
4 pivoted into the seat receiving recess.

1 4. The stowable seating apparatus of claim 1 further including a foldable seat
2 back pivotably attached to the seat cushion to be foldable upon the upper surface of the
3 seat cushion to a folded position of the seat back, and openable to an open position of the
4 seat back for supporting the back of a passenger seated upon the cushion.

1 5. The stowable seating apparatus of claim 1 wherein the seat does not
2 extend above the floor surface when the seat is stowed in the seat receiving recess in the
3 floor.

1 6. A stowable seating apparatus for a vehicle having a floor defining a floor
2 surface, the seating apparatus comprising:

3 a seat receiving recess in the floor, extending downward from the floor

4 surface and opening upward through the floor surface; and

5 a seat having a seat cushion, a foldable seat back, and a leg operatively
6 attaching the seat cushion to the floor for selective movement of the seat with respect to
7 the seat receiving recess between a deployed position of the seat, an intermediate position
8 of the seat, and a stowed position of the seat;

9 the seat cushion having an upper surface for receiving the buttocks of a
10 passenger when the seat is in the deployed position, and a lower surface facing the floor
11 surface when the seat is in the deployed position;

12 the foldable seat back pivotably attached to the seat cushion to be foldable
13 upon the upper surface of the seat cushion to a folded position of the seat back, and
14 openable to an open position of the seat back for supporting the back of a passenger
15 seated upon the cushion;

16 the leg having an upper pivot operatively attached to the lower surface of
17 the seat cushion and a lower pivot operatively attached to the floor for selective
18 movement of the leg between a substantially vertical deployed position of the leg and a
19 substantially horizontal stowed position of the leg, with the leg in the substantially
20 horizontal stowed position extending into the seat receiving recess in a direction
21 substantially parallel to the floor surface;

22 the leg in the substantially vertical deployed position of the leg supporting
23 the seat cushion in both the deployed position and intermediate positions of the seat, with
24 the seat cushion extending substantially perpendicular to the leg in the deployed position
25 of the seat, and the seat cushion extending substantially parallel to the leg in the
26 intermediate position of the seat;

27 the seat cushion being operatively attached to the upper pivot of the leg for
28 selective movement with respect to both the seat receiving recess and the leg, between the
29 deployed position of the seat, whereat the seat cushion extends substantially
30 perpendicular to the leg with the leg in the deployed position of the leg and the seat back
31 in either the open or the folded position, and the intermediate position of the seat whereat
32 the seat cushion with the seat back folded thereupon extends substantially parallel to the
33 leg with the leg in the deployed position of the leg;

34 the seat selectively movable between the intermediate position of the seat
35 and the stowed position of the seat within the seat receiving recess by pivoting the seat
36 about the lower pivot of the leg.

1 7. The stowable seating apparatus of claim 6 wherein the seat is selectively
2 movable in a transverse direction with respect to the seat receiving recess.

1 8. The stowable seating apparatus of claim 7 wherein the seat cushion with
2 the foldable back attached thereto are operatively attached to the leg and floor for
3 translating movement in a transverse direction with respect to the seat receiving recess,
4 between a first transverse position of the seat whereat the seat cannot be pivoted into the
5 seat receiving recess and a second transverse position of the seat whereat the seat can be
6 pivoted into the seat receiving recess.

1 9. The stowable seating apparatus of claim 8 wherein the seat cushion with
2 the foldable back attached thereto are further operatively attached to the leg and floor for

3 translating movement in a transverse direction with respect to the seat receiving recess,
4 between the first and second transverse positions of the seat and a third transverse position
5 of the seat whereat the seat cannot be pivoted into the seat receiving recess.

1 10. The stowable seating apparatus of claim 8 wherein the lower pivot
2 includes a locking mechanism for holding the leg in the deployed position of the leg when
3 the seat is in the first transverse position of the seat, and allowing the leg to be pivoted to
4 the stowed position of the leg when the seat is in the second transverse position of the
5 seat.

1 11. The stowable seating apparatus of claim 8 wherein the upper pivot
2 includes a locking mechanism for locking the seat cushion against being pivoted about
3 the upper pivot when the seat cushion is in a first transverse position of the seat cushion
4 with respect to the leg, and allowing the seat cushion to be pivoted about the upper pivot
5 when the seat cushion is in a second transverse position of the seat cushion with respect
6 to the leg.

1 12. The stowable seating apparatus of claim 6 wherein the leg, seat back and
2 seat cushion do not extend above the floor surface when the seat is stowed in the seat
3 receiving recess in the floor.

1 13. The stowable seating apparatus of claim 6 further comprising a cover for
2 closing the seat receiving recess, the cover having an upper surface thereof extending

3 substantially parallel to the floor surface when the cover is closing the seat receiving
4 recess.

1 14. The stowable seating apparatus of claim 6 further comprising a second leg
2 pivotably attached to the lower surface of the seat cushion for movement between a
3 deployed position of the second leg, whereat the second leg extends substantially
4 perpendicular to the seat cushion for supporting the seat cushion on the floor when the
5 seat is in the deployed position, and a stowed position of the second leg, whereat the
6 second leg extends substantially parallel to the seat cushion.

1 15. The stowable seating apparatus of claim 14 wherein the leg, second leg,
2 seat back and seat cushion do not extend above the floor surface when the seat is stowed
3 in the seat receiving recess in the floor.

1 16. The stowable seating apparatus of claim 14 further comprising a helper
2 link operatively connected between the leg and the second leg for pivoting the second leg
3 from the stowed position of the second leg to the deployed position of the second leg as
4 the seat is pivoted from the intermediate position to the deployed position of the seat, and
5 for pivoting the second leg from the deployed position of the second leg to the stowed
6 position of the second leg as the seat is pivoted from the deployed position to the
7 intermediate position of the seat.

1 17. The stowable seating apparatus of claim 16 wherein the leg, second leg,
2 helper link, seat back and seat cushion do not extend above the floor surface when the
3 seat is stowed in the seat receiving recess in the floor.

1 18. The stowable seating apparatus of claim 14 further comprising:
2 a seat anchorage in the floor for receipt of the second leg in the deployed
3 position of the second leg; and
4 a releasable latch attached to a distal end of the second leg for engaging
5 the seat anchorage when the second leg is in the deployed position of the second leg.

1 19. The stowable seating apparatus of claim 6 wherein the seat back includes a
2 distal end thereof that folds toward the seat receiving recess when the seat is in the
3 deployed position.